Amendments to the Specification:

Please add the following prior to the first paragraph, beginning on page 1, line 1:

CROSS REFERENCE TO RELATED APPLICATION

This application claims benefit of foreign priority to PCT No. PCT/IB04/52518, filed February 8, 2007, based on EP application number 03104503.2, filed December 2, 2003, which are incorporated herein in whole by reference.

Please replace paragraph [0034] with the following amended paragraph:

The diagram in Fig. 1 shows the components which are involved in the correction of the X-ray image R, which components are all implemented in data-processing equipment 2 (generally in the form of software modules). Using an X-ray image R which is generated by the X-ray unit 1, an offset correction is initially performed, whereby a dark or offset reference picture Q, which is taken without exposure, is subtracted from the X-ray image R in order to compensate for additive, reproducible picture errors (i.e., offset correction accomplished via components generally indicated in Fig. 1 as the Offset Correction Module). The offset reference picture Q is generally refreshed every few minutes, whereby it is frequently derived by averaging several individual pictures.

Please replace paragraph [0035] with the following amended paragraph:

Furthermore, a gain correction (i.e., gain correction accomplished via components generally indicated in Fig. 1 as the Gain Correction Module) is performed whereby the offset-corrected X-ray image is divided by an homogeneous gain reference picture G. In order to avoid numerical values less than 1, the quotient is generally multiplied at the same time by a large scaling factor sc (blocks 5, 6, 7).

Please replace paragraph [0036] with the following amended paragraph:

Finally, the defective picture elements which are marked in a defect map D (block 8) are corrected in block 9 on the basis of their neighboring values (through interpolation, for example) (i.e., defective picture elements correction accomplished via components generally indicated in Fig. 1 as the Defective Picture Elements Correction Module). The correction thereby relates to individual pixels, small groups of pixels, rows or columns in the detector, or parts thereof.

Please replace paragraph [0042] with the following amended paragraph:

Following on from these comments, the analysis of an individual picture element p will now be explained in closer detail in accordance with the flowchart in Fig. 2. A pixel p from an X-ray image I (e.g., as indicated by reference numeral 3 in Fig. 1, and which has been pre-corrected with the current defect map) is selected in block 10 of this flowchart, whereby the method shown is performed in sequence for all the pixels in the X-ray image I. Furthermore, a check is performed in block 10 to establish whether the (gray-scale) value W(p) of the picture element lies between the specified limits W_{min} and W_{max}, i.e. whether it has been exposed with a medium dose. If so, the value of a test number map (T_map) is increased by one at the place corresponding to the pixel p (block 16), and the picture element p is analyzed further in accordance with the right branch of Fig. 2 to determine whether there is a defect here. The entries in the test number map (T_map) thus record how often each picture element has been analyzed for defects.

Please replace paragraph [0044] with the following amended paragraph:

This analysis of a picture element p, which is selected in block 10, commences in block 11 with the definition of its neighborhood n(p). Fig. 3 shows examples for the possible definitions of neighborhoods (i.e. groups of pixels n) for a given pixel p (further wherein possible definitions for various groups of pixels are illustrated in respective ones of demarcated examples a) – h) of Fig. 3). A neighborhood in accordance with example d) in Fig. 3 is preferred in this case for the analysis of individual pixels p. In order to locate defective rows or columns, defining a neighborhood in accordance with the alternatives in example f) of Fig. 3 ~~Fig. 3f~~ would be the most suitable approach.

Please replace paragraph [0054] with the following amended paragraph:

Furthermore, the calculation of ~~a X-rango~~ an X-ray image I_corr, which has been provisionally corrected, can be performed on a more differentiated basis in block 18 and, for example, use both the current defect map D as well as the current candidate map, C_map. This would also serve to correct inaccurate interpolations in the pre-corrected X-ray image I which occur in the places in the defect map D which are adjacent to defects which are first detected in the C_map.